

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference CH920020011	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/IB 03/05137	International filing date (day/month/year) 12.11.2003	Priority date (day/month/year) 29.11.2002
International Patent Classification (IPC) or both national classification and IPC G06F17/30		
Applicant INTERNATIONAL BUSINESS MACHINES CORPORATION et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
 - ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 15.05.2004	Date of completion of this report 10.11.2004
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Wienold, N Telephone No. +49 89 2399-2139 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/IB 03/05137**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-16 as originally filed

Claims, Numbers

1-18 as originally filed

Drawings, Sheets

1/2-2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
 - ☐ the language of publication of the international application (under Rule 48.3(b)).
 - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority in written form.
 - ☐ furnished subsequently to this Authority in computer readable form.
 - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
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International application No. **PCT/IB 03/05137**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-18
	No: Claims	
Inventive step (IS)	Yes: Claims	1-18
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D1: US 2002/133621 A1 (LEIBOWITZ NATHANIEL ET AL) 19 September 2002 (2002-09-19)
D2: WO 01/75652 A (CT SPAN COMM CORP) 11 October 2001 (2001-10-11)
D3: US 2002/062336 A1 (BJORNER NIKOLAJ S ET AL) 23 May 2002 (2002-05-23)
D4: WO 02/15035 A (NAPSTER INC) 21 February 2002 (2002-02-21)

1. D1, which is regarded as closest prior art, discloses:
 - a) method of providing index server support to a file sharing application, see e.g. abstract; queries to index servers are intercepted and answered with cached responses;
 - b) handling requests for investigating a hierarchical structure of index servers in a network, including intercepting an investigation request that is directed to a remote index server; see abstract; fig. 1; queries for searched files are sent into the p2p-network comprising an hierarchy of index servers (ref. 52) and intercepted (i.e. handled) by the index servers.
2. The subject-matter of claim 1 differs from the disclosure of D1 in that the originator of the investigation request is notified of the intercepting index server identity.
3. The subject-matter of claim 1 is therefore new (Article 33(2) PCT).
4. The problem to be solved by the present invention may be regarded as 'how to optimize the retrieval of data files via an file sharing application?'.
5. The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

The solution of claim 1 of notifying the requesting client of the identity of the intercepting index server is not disclosed in D1. In the opposite, D1 discloses that the

acceleration server of D1 act as a transparent proxy server, see D1, p. 5, paragraph 66. Therefore, the identity of the acceleration server is unknown to the requesting client when receiving the cached response of the acceleration server which serves simply as proxy cache for queries and responses which is an alternative solution for the problem posed.

D2 provides also a solution to optimize the data retrieval via an file sharing application. This is achieved by assigning an index server to file sharing clients which are in topologically close. But this is achieved via a static solution, which is based on the so called 'media exchange server assignment table', see e.g. D2, p. 4, l. 29 -31. No dynamic discovery of an index server is performed.

D3 uses a server system called registrar registering file sharing clients to so-called RNS servers, which provide the indexing information to the clients. The registrar must be known to the client, see e.g. D3, p. 2, paragraph 31 to p.3, paragraph 33. Therefore, no dynamic discovery of an index server is performed.

D4 uses a so-called host monitor to monitor the peer-to-peer network. Based on the collect data, hosts (i.e. clients of the p2p-network) are ranked according to their suitability to serve as entry points into the p2p-network (e.g. Gnutella). When entering, clients query the host monitor for a suitable host for starting a query. Again, no dynamic discovery of an index server according to claim 1 is performed.

The subject-matter of claim 1 is therefore inventive (Article 33(3) PCT).

6. Claims 2-12 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.
7. Independent claims 15 (view of requesting client) and 18 (mixed client and server view) correspond to independent claim 1 (view of intercepting index server). Therefore, claims 15 and 18 and dependent claims 16 and 17 also meet the requirements of the PCT with respect to novelty and inventive step.

Further Remarks

1. Essential features are missing in claims 1, 15 and 18 (Article 6 PCT taken in combination with Rule 6.3(b) PCT). In claim 15 the concept of intercepting the investigation request is missing, whereas this concept is correctly contained in claims 1

and 18. Furthermore, the step of intercepting is performed by a router connected to the index server, see description p. 10, l. 6-15. Otherwise, it would be unclear how messages could be intercepted by the index server. This feature is missing in claims 1, 15 and 18.